Video Quality and Interoperability across Videophones Today and in the Future¹

Christian Vogler and Norman Williams http://tap.gallaudet.edu/Conferences/NAD2012/

Videophones and software tested for Interoperability:

Sorenson:

- nTouch VP
- nTouch PC
- nTouch iPhone
- nTouch iPad
- nTouch Evo

ZVRS:

- Z20 (SIP)
- Z150
- Z340
- Z0jo
- Z4 Mac
- Z4 iPad
- Z4 iPhone
- Z4 Evo

Purple:

- P3 Mac
- VRS iPad
- VRS iPhone
- VRS Evo

SnapVRS:

Ojo

Convo:

- Desktop Mac
- Mobile iPad
- Mobile iPhone

¹ The contents of this presentation were developed with funding from the National Institute on Disability and Rehabilitation Research, U.S. Department of Education, grant number H133E090001 (RERC on Telecommunications Access). However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

We are grateful to Verizon Wireless for lending us LTE equipment for testing. Paula Tucker was an invaluable help with assembling the presentation.

Because of the huge combination of point-to-point calls, only devices and software that are available to new customers were tested. The Viable VPad, Sorenson VP200, and Purple MVP have been discontinued, and thus have been omitted from this list.

Summary

The **Sorenson** nTouch VP is compatible with many non-Sorenson products. The nTouch PC, iPhone, iPad, and Evo clients do not work with non-Sorenson products. The nTouch VP can leave video mails on most non-Sorenson products, but not vice versa.

ZVRS products work well with many videophones, and for taking incoming video messages. There were problems with leaving messages from a ZVRS phone to a Purple phone – the Z device sees black video. This bug has been reported and may have been fixed by now.

Purple products work well with many videophones. However, they had trouble taking messages from several phones. Some calls resulted in the phone ringing, but Purple mail never kicked in. This might have been due to sharing an account across multiple devices. Purple and Convo products have problems talking to each other. The Purple iOS client has problems leaving video messages if the answering point rejects the call. This bug has been reported and may have been fixed by now.

The **SnapVRS** phone works with most other videophones, and can take video messages from most. It had problems taking messages from some Purple products.

Convo does not provide a video answering machine yet, so we could not leave messages. However, it can leave messages on most other vendors' products. Convo has problems talking to Purple products.

There is no single perfect videophone. Right now, if everyone wants to communicate with everyone else, more than one videophone is still required. Mobile apps have more problems than desktop software and stand-alone videophones.

Video Quality

The following factors affect video quality:

- Camera
- videophone network settings
- WiFi signal quality
- Internet speed
- Mobile network signal and speed

It is especially important that the videophone settings match the available network bandwidth. If the setting is too high (for example, your upload speed is 256 kBit/s, and you set the videophone to 384 kBit/s), a conversation becomes impossible. The videophone network speed must be set **lower** than your Internet bandwidth.